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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 09/885,459 | 06/19/2001 | Donald E. Alfano | CYGL-25,768 | 2744 |
| 25883 | 7590 | 11/12/2004 | EXAMINER | |
| HOWISON & ARNOTT, L.L.P. | | | KIM, KENNETH S | |
| P.O. BOX 741715 | | | ART UNIT | |
| DALLAS, TX 75374-1715 | | | PAPER NUMBER | |

2111

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,459

Applicant(s)

ALFANO ET AL.

Examiner

Kenneth S KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/13/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 1, 2004 has been entered.

1. Claims 1-6 remain for examination and claims 8-13 remain withdrawn.
2. The abstract of the disclosure is objected to because the current abstract does not reflect the inventive feature of the claimed invention to distinguish over the prior art. Correction is required. See MPEP § 608.01(b).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, it is not clear whose functionality is associated with what in "the reconfigurable interface capable to define the functionality associated therewith".

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being obvious over Cheung et al, U.S. Patent No. 6,262,594 in view of Allen et al, U.S. Patent No. 5,732,207, both cited in the previous office action.

Cheung et al teaches the invention substantially as claimed as set forth in the previous office action incorporated herein by reference and further teaches a plurality of functional input/output blocks (col. 5, line 9) having an associated functionality (col. 4,

line 56) and a requirement for a defined number of i/o pins (col. 4, line 45; col. 5, line 9) wherein the total of said defined number exceeds the number of i/o pins available (col. 4, line 44), however, does not expressly teach that the i/o pin configuration storing memory is on-chip and non-volatile.

Allen et al teaches the use of an on-chip non-volatile memory to store i/o pin configuration information (220).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made that using an on-chip non-volatile memory is a desirable option that allows a more compact circuit and durable (with power off) storage of data.

The person would have been motivated to incorporate an on-chip non-volatile memory to have programmable data without volatility including the i/o pin configuration data as taught in Allen et al (col. 3, line 30).

6. Applicant's arguments filed October 1, 2004 have been fully considered but they are not persuasive.

Applicant argued that Cheung et al does not teach the combination of on-chip memory and the multiple functional blocks with the requirement for a number of pins.

The reference teaches the function blocks with the requirement of a number of pins (col. 5, line 9) and non-volatile memories are routinely incorporated on the same substrate.

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sample et al taught a method of connecting i/o pins to internal logic block using configurable crossbar interface.

May et al taught a method of selectively coupling i/o pins to multiple logic blocks.

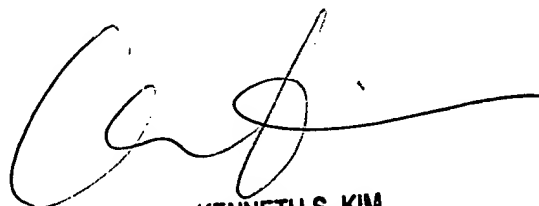
Fink et al taught a method of controlling i/o pin functionality.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-3627. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

November 8, 2004

A handwritten signature in black ink, appearing to read 'K. Kim', with a long horizontal flourish extending to the right.

KENNETH S. KIM
PRIMARY EXAMINER